Tessenderlo Kerley Services

Test Platform Test Facility Technical Session

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Tessenderlo Kerley Services

Tessenderlo Kerley Services (TKS) is a full service engineering, fabrication, and construction company.

Our primary business is the support of our parent company, Tessenderlo Kerley, Inc (TKI) and their family of companies and partners.

Tessenderlo KERLEY

Engineering Services

- Process Engineering
- Mechanical Engineering
- Civil/Structural Engineering
- Piping Engineering
- Electrical Engineering
- Instrumental and Control Engineering

Fabrication and Construction Services

Tessenderlo KERLEY

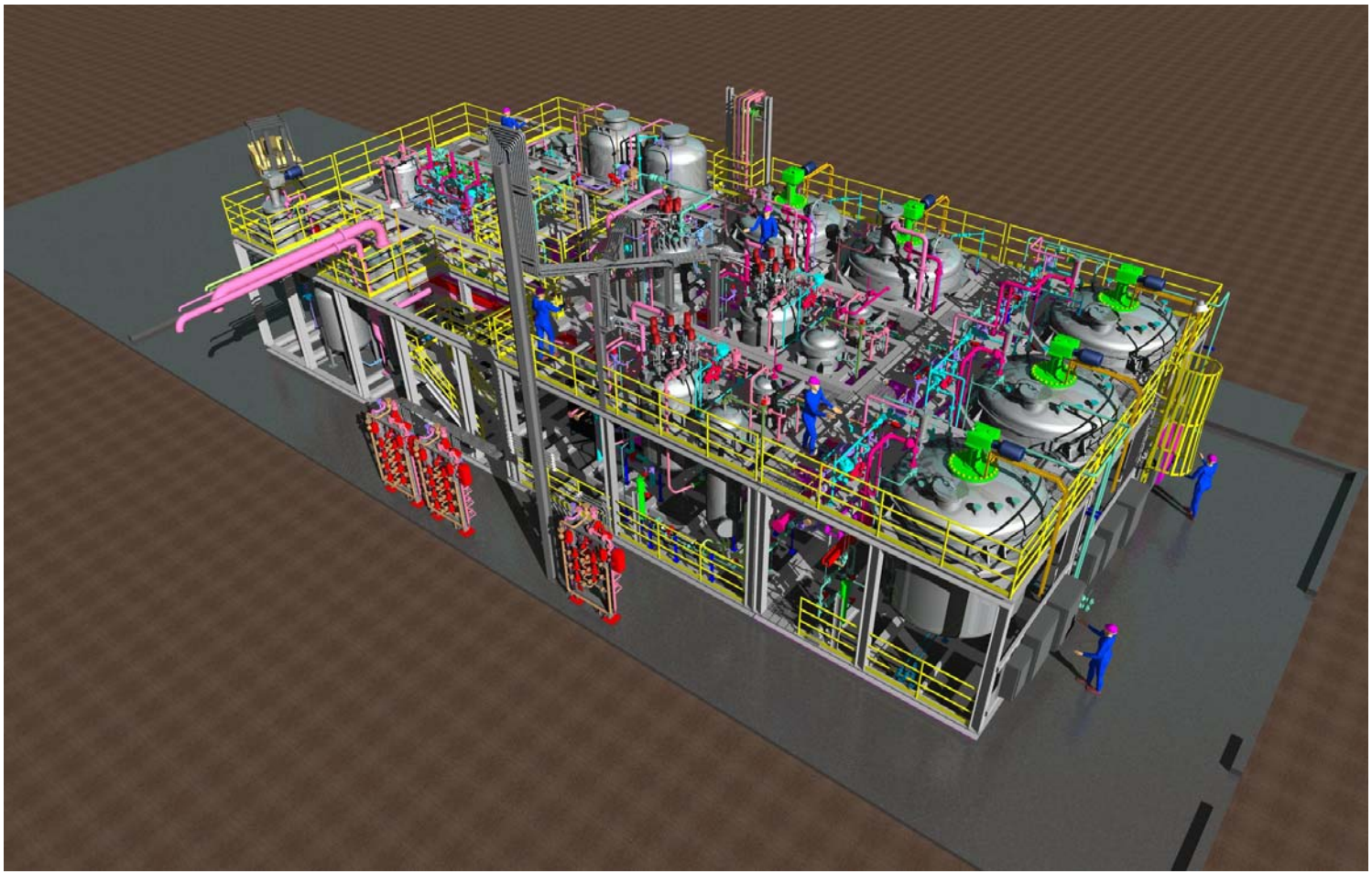
- ASME Code Fabrication Shop
- “U” , “S”, “R” stamps
- Skid Fabrication
- Equipment Fabrication
- Piping and Structural Steel Fabrication
- Construction Services

PEP Project

Teaming with Engineering Products Division (EPD) of Washington Group in Carlsbad, NM

Provide detail engineering, design, procurement, and fabrication of 16 modular skid units.

M12 PEP



TKI/TKS Plant Design Standards and Procedures

Process Safety Management (PSM) of highly hazardous chemicals.

OSHA 1910.119

Purpose: Requirements for preventing of minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals.

PSM Overview

- Employee Participation
- Process Safety Information
- Process Hazard Analysis
- Operating Procedures
- Training
- Contractors

PSM Overview

- Pre-Start up Safety Review
- Mechanical Integrity
- Hot Work Permits
- Management of Change
- Incident Investigation
- Emergency Response

PSM Overview

- Compliance Audits
- Trade Secrets

Design

- Scope of Work
- PFD/P &ID
- Specifications
- Control System
- General Arrangement/Plot Plan
- Process Hazard Analysis
- Detailed Design
- Procurement
- Document Control

Fabrication

- Structural
- Equipment
- Piping
- Assembly
- Electrical
- Instrumentation
- Control System

Fabrication

- Safety
- Quality Control
- Material Control and Receiving
- Positive material identification

Construction

- Pilot Plant
- Grass Roots
- Retrofit
- Skid/Modular

Construction

- Safety
- Quality Control (QC)
- Material Control/Receiving
- Component Installation
- Punch list
- Mechanical Completion Matrix

Pre-Start Up Safety Review

- Construction and Equipment is in accordance with design specs. (Mechanical Completion Matrix)
- Safety, operating and emergency procedures are in place
- PHA has been performed
- MOC procedures are in place
- Employees have been trained

Operator Training

- Classroom and field work
- Involve them in as much as possible to help them learn the new process.
- Extensive safety training
- Shifts 24/7 for 2-3 weeks
- Number of operators doubled up

Change Control

- Management of Change
- Maintain drawings, redline, etc
- Log book use for change
- Procedure update

Lessons Learned

What went well:

- Good communication between design group and parent company and plant staff.
- Defined Scope of work and objectives prior to start of project.

Lessons Learned

What went well:

- Design group assistance in startup and commissioning.
- Construction familiar with design and construction techniques.

Lessons Learned

What did not go well:

- Communication between client and design group.
- Operational Input in the middle of design
- Not realizing full impact of changes to design - budget/schedule

Lessons Learned

What did not go well:

- Material receiving not inspecting deliveries until installing.
- Materials of construction for components not being certified.
- Safety incidents due to current labor pool being inexperienced.